

ITE 05.1.1 Communications - Systems

The study of the systems as they apply to the various levels of Communication Technology

- Develop an awareness of basic technological systems and identify the components of the systems

Links to Standards

Science

(04.1.1)

Develop an understanding of systems, order, and organization.

ITE 05.1.2 Communications - Characteristics,Impacts

The study of the characteristics, impacts and development of Communication Technology

- Apply concepts, processes, and skills to explore the impacts of industrial technology in every day life
- Recognize the inter-relationship among technology, people, and the environment in the past, present, and future

Links to Standards

Reading/Speaking/Listening

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Science

(04.8.1)

Develop an understanding of science as a human endeavor.

Social Studies/History

(04.1.1)

Compare communities and describe how United States and Nebraska communities changed physically and demographically over time.

(04.1.3)

Describe social and economic development of Nebraska in the 20th century.

ITE 05.1.3 Communications - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Communication Technology

- Use a technical process to solve a problem and explain its relationship to decision making

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.5.1)

Students will collect, organize, record, and interpret data and describe the findings.

Science

(04.2.1)

Develop the abilities needed to do scientific inquiry.

(04.6.1)

Develop an understanding of technological design.

ITE 05.1.4 Communications - Resources

The study of the resources used in Communication Technology

- Select resources available in performing technological processes at home, school, and in the community

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.1.5 Communications - Integrated Skills

The study of the integration of skills from other curricular areas into Communication Technology

- Use industrial technology to reinforce and apply mathematical concepts, scientific principles, language arts, and other basic skills

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.2.1)

Students will estimate, add, subtract, multiply, and divide whole numbers without and with calculators and solve word problems.

(04.2.2)

Students will estimate, add, and subtract decimals without and with calculators and solve word problems.

(04.4.1)

Students will identify, describe, and create two- and three-dimensional geometric shapes.

ITE 05.1.6 Communications - Career Information/Transition

The study of the careers and opportunities available in Communication Technology

- Develop an awareness of careers related to industrial technologyTransition

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.2.1 Construction - Systems

The study of the systems as they apply to the various levels of Construction Technology

- Develop an awareness of basic technological systems and identify the components of the systems

Links to Standards**Science**

(04.1.1)

Develop an understanding of systems, order, and organization.

Social Studies/History

(01.1.1)

Demonstrate an understanding that history relates to events and people of other times and places.

ITE 05.2.2 Construction - Characteristics, Impacts

The study of the characteristics, impacts and development of Construction Technology

- Apply concepts, processes, and skills to explore the impacts of industrial technology in every day life
- Recognize the inter-relationship among technology, people, and the environment in the past, present, and future

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.5.1)

Students will collect, organize, record, and interpret data and describe the findings.

Science

(04.8.1)

Develop an understanding of science as a human endeavor.

Social Studies/History

(04.1.1)

Compare communities and describe how United States and Nebraska communities changed physically and demographically over time.

(04.1.3)

Describe social and economic development of Nebraska in the 20th century.

ITE 05.2.3 Construction - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Construction Technology

- Use a technical process to solve a problem and explain its relationship to decision making

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.4.1)

Students will identify, describe, and create two- and three-dimensional geometric shapes.

Science

(04.2.1)

Develop the abilities needed to do scientific inquiry.

(04.6.1)

Develop an understanding of technological design.

Social Studies/History

(04.1.5)

Describe Nebraska's history, including geographic factors, from European contact to statehood.

ITE 05.2.4 Construction - Resources

The study of the resources used in Construction Technology

- Select resources available in performing technological processes at home, school, and in the community

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.2.5 Construction - Integrated Skills

The study of the integration of skills from other curricular areas into Construction Technology

- Use industrial technology to reinforce and apply mathematical concepts, scientific principles, language arts, and other basic skills

Links to Standards

Reading/Speaking/Listening

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.2.1)

Students will estimate, add, subtract, multiply, and divide whole numbers without and with calculators and solve word problems.

(04.2.2)

Students will estimate, add, and subtract decimals without and with calculators and solve word problems.

Science

(04.1.3)

Develop an understanding of change, constancy, and measurement.

ITE 05.2.6 Construction - Career Information/Transition

The study of the careers and opportunities available in Construction Technology

- Develop an awareness of careers related to industrial technology

Links to Standards

Reading/Speaking/Listening

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.3.1 Manufacturing - Systems

The study of the systems as they apply to the various levels of Manufacturing Technology

- Develop an awareness of basic technological systems and identify the components of the systems

Links to Standards**Science**

(04.1.1)

Develop an understanding of systems, order, and organization.

ITE 05.3.2 Manufacturing - Characteristics,Impacts

The study of the characteristics, impacts and development of Manufacturing Technology

- Apply concepts, processes, and skills to explore the impacts of industrial technology in every day life
- Recognize the inter-relationship among technology, people, and the environment in the past, present, and future

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.5.1)

Students will collect, organize, record, and interpret data and describe the findings.

Science

(04.8.1)

Develop an understanding of science as a human endeavor.

Social Studies/History

(04.1.11)

Use maps and globes to acquire information about people, places, and environments.

(04.1.13)

Describe the process of making laws, carrying out laws, and determining if laws have been violated.

ITE 05.3.3 Manufacturing - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Manufacturing Technology

- Use a technical process to solve a problem and explain its relationship to decision making

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.5.1)

Students will collect, organize, record, and interpret data and describe the findings.

Science

(04.2.1)

Develop the abilities needed to do scientific inquiry.

(04.6.1)

Develop an understanding of technological design.

ITE 05.3.4 Manufacturing - Resources

The study of the resources used in Manufacturing Technology

- Select resources available in performing technological processes at home, school, and in the community

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.3.5 Manufacturing - Integrated Skills

The study of the integration of skills from other curricular areas into Manufacturing Technology

- Use industrial technology to reinforce and apply mathematical concepts, scientific principles, language arts, and other basic skills

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.2.1)

Students will estimate, add, subtract, multiply, and divide whole numbers without and with calculators and solve word problems.

(04.2.2)

Students will estimate, add, and subtract decimals without and with calculators and solve word problems.

Science

(04.1.3)

Develop an understanding of change, constancy, and measurement.

ITE 05.3.6 Manufacturing - Career Information/Transition

The study of careers and opportunities available in Manufacturing Technology

- Develop an awareness of careers related to industrial technology

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.4.1 Transportation - Systems

The study of the systems as they apply to the various levels of Transportation Technology

- Develop an awareness of basic technological systems and identify the components of the systems

Links to Standards**Science**

(04.1.1)

Develop an understanding of systems, order, and organization.

ITE 05.4.2 Transportation - Characteristics, Impact

The study of the characteristics, impacts and development of Transportation Technology

- Apply concepts, processes, and skills to explore the impacts of industrial technology in every day life
- Recognize the inter-relationship among technology, people, and the environment in the past, present, and future

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.5.1)

Students will collect, organize, record, and interpret data and describe the findings.

Science

(08.8.1)

Develop an understanding of science as a human endeavor.

Social Studies/History

(04.1.1)

Compare communities and describe how United States and Nebraska communities changed physically and demographically over time.

(04.1.3)

Describe social and economic development of Nebraska in the 20th century.

(04.1.8)

Describe characteristics of a market economic system and the interactions of consumers and producers.

ITE 05.4.3 Transportation - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Transportation Technology

- Use a technical process to solve a problem and explain its relationship to decision making

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.2.1)

Students will estimate, add, subtract, multiply, and divide whole numbers without and with calculators and solve word problems.

(04.2.2)

Students will estimate, add, and subtract decimals without and with calculators and solve word problems.

(04.4.1)

Students will identify, describe, and create two- and three-dimensional geometric shapes.

Science

(04.2.1)

Develop the abilities needed to do scientific inquiry.

(04.6.1)

Develop an understanding of technological design.

Social Studies/History

(04.1.5)

Describe Nebraska's history, including geographic factors, from European contact to statehood.

ITE 05.4.4 Transportation - Resources

The study of the resources used in Transportation Technology

- Select resources available in performing technological processes at home, school, and in the community

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 05.4.5 Transportation - Integrated Skills

The study of the integration of skills from other curricular areas into Transportation Technology

- Use industrial technology to reinforce and apply mathematical concepts, scientific principles, language arts, and other basic skills

Links to Standards**Reading/Speaking/Listening**

(04.1.3)

Students will identify the main idea and supporting details in what they have read.

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

(04.1.7)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(04.2.5)

Students will demonstrate the use of self-generated questions, note taking, and summarizing while learning.

(04.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(04.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(04.2.1)

Students will estimate, add, subtract, multiply, and divide whole numbers without and with calculators and solve word problems.

(04.2.2)

Students will estimate, add, and subtract decimals without and with calculators and solve word problems.

(04.2.3)

Students will estimate, add, and subtract fractions with like denominators without calculators and solve word problems.

Science

(04.1.3)

Develop an understanding of change, constancy, and measurement.

ITE 05.4.6 Transportation - Career Information/Transition

The study of the careers and opportunities available in Transportation Technology

- Develop an awareness of careers related to industrial technology

Links to Standards**Reading/Speaking/Listening**

(04.1.4)

Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

ITE 08.1.1 Communications - Systems

The study of the systems as they apply to the various levels of Communication Technology

- Explain how the human sensory system contributes to communication
- Demonstrate an example of audio, visual, and/or audio-visual communication

Links to Standards**Mathematics**

(08.1.3)

Students will write and use numbers in expanded exponential form and scientific notation.

Science

(08.1.1)

Develop an understanding of systems, order, and organization.

ITE 08.1.2 Communications - Characteristics,Impacts

The study of the characteristics, impacts and development of Communication Technology

- Explore electronic, graphic, light, optic, and acoustic modes of communication
- Recognize the interaction of communication systems and gender/cultural diversity
- Send, receive, and understand verbal and non-verbal messages/information

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Science

(08.7.4)

Develop an understanding of risks and benefits.

Social Studies/History

(08.1.9)

Describe key people, events, and ideas since World War II.

ITE 08.1.3 Communications - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Communication Technology

- Apply a problem-solving process to arrive at a workable solution to a communication problem
- Interact in a group to make informed decisions

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.5.4)

Students will identify statistical methods and probability for making decisions.

(08.6.2)

Students will apply algebraic concepts and operations to solve linear equations and word problems.

Science

(08.6.1)

Develop an understanding of technological design.

ITE 08.1.4 Communications - Resources

The study of the resources used in Communication Technology

- Identify and safely apply communication resources to inform, persuade, or entertain
- Develop skills to process information

Links to Standards

Reading/Speaking/Listening (08.1.2)
Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

Social Studies/History (08.4.2)
Demonstrate skills for historical analysis.

ITE 08.1.5 Communications - Integrated Skills

The study of the integration of skills from other curricular areas into Communication Technology

- Reinforce systems of communication by exploring and applying knowledge and skills from other curricular areas

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.1.1)

Students will recognize natural numbers, whole numbers, integers, and rational numbers.

(08.1.2)

Students will determine equivalences among fractions, decimals, and percents.

(08.2.1)

Students will add, subtract, multiply, and divide decimals and proper, improper, and mixed fractions with uncommon and common denominators with and without the use of technology.

(08.2.2)

Students will identify the appropriate operation and do the correct calculations when solving word problems.

(08.2.3)

Students will solve problems involving whole numbers, integers, and rational numbers (fractions, decimals, ratios, proportions, and percents) with and without the use of technology.

(08.2.5)

Students will apply strategies of estimation when solving problems with and without the use of technology.

(08.3.1)

Students will select measurement tools and measure quantities for temperature, time, money, distance, angles, area, perimeter, volume, capacity, and weight/mass in standard and metric units at the designated level of precision.

(08.3.2)

Students will convert units within measurement systems using standard and metric, given conversion factors.

(08.4.1)

Students will identify, describe, compare, and classify two- and three dimensional geometric figures - plane figures like polygons and circles; solid figures like prisms, pyramids, cones, spheres, and cylinders; lines, line segments, rays, angles, parallel and perpendicular lines.

(08.4.2)

Students will use geometric properties, the Pythagorean theorem, and the relationships of congruence, similarity, and symmetry.

(08.4.3)

Students will use formulas to solve problems involving perimeter and area of a square, rectangle, parallelogram, trapezoid and triangle, as well as the area and circumference of circles.

(08.4.4)

Students will solve problems given formulas for volume and surface area of rectangular prisms, cylinders, and cones.

(08.4.5)

Students will apply transformations to two- and three-dimensional geometric figures.

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

ITE 08.1.6 Communications - Career Information/Transition

The study of the careers and opportunities available in Communication Technology

- Explore careers and opportunities related to the communication industry
- Practice employability skills

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

ITE 08.2.1 Construction - Systems

The study of the systems as they apply to the various levels of Construction Technology

- Identify and use methods and techniques of construction
- Identify the types of construction: light, commercial, industrial, and civil

Links to Standards**Science**

(08.1.1)

Develop an understanding of systems, order, and organization.

Social Studies/History

(08.1.3)

Describe key people, events, and ideas from colonial America.

ITE 08.2.2 Construction - Characteristics, Impacts

The study of the characteristics, impacts and development of Construction Technology

- Summarize the history of the construction industry
- Recognize the impact of technology on the construction industry
- Recognize the impact of workforce diversity
- Describe characteristics of the various types of construction: light, commercial, industrial, and civil

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.5.2)

Students will read and interpret tables, charts, and graphs to make comparisons and predictions.

Social Studies/History

(08.1.9)

Describe key people, events, and ideas since World War II.

ITE 08.2.3 Construction - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Construction Technology

- Apply a problem-solving approach to solve a problem
- Apply decision-making skills to select appropriate resources

Links to Standards

Reading/Speaking/Listening

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.5.1)

Students will collect, construct, and interpret data displays and compute mean, median, and mode.

ITE 08.2.4 Construction - Resources

The study of the resources used in Construction Technology

- Safely operate tools and equipment appropriate for the construction industry
- Introduce and develop skills related to the construction industry
- Develop craftsmanship in the construction process
- Identify and use different types of construction materials
- Describe resources used in the construction industry

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

ITE 08.2.5 Construction - Integrated Skills

The study of the integration of skills from other curricular areas into Construction Technology

- Demonstrate the ability to measure accurately
- Perform basic skills related to the construction industry
- Interpret working drawings
- Follow written and oral directions

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.1.1)

Students will recognize natural numbers, whole numbers, integers, and rational numbers.

(08.1.2)

Students will determine equivalences among fractions, decimals, and percents.

(08.2.1)

Students will add, subtract, multiply, and divide decimals and proper, improper, and mixed fractions with uncommon and common denominators with and without the use of technology.

(08.2.2)

Students will identify the appropriate operation and do the correct calculations when solving word problems.

(08.2.3)

Students will solve problems involving whole numbers, integers, and rational numbers (fractions, decimals, ratios, proportions, and percents) with and without the use of technology.

(08.2.4)

Students will apply the order of operations to solve problems with and without the use of technology.

(08.2.5)

Students will apply strategies of estimation when solving problems with and without the use of technology.

(08.3.1)

Students will select measurement tools and measure quantities for temperature, time, money, distance, angles, area, perimeter, volume, capacity, and weight/mass in standard and metric units at the designated level of precision.

(08.3.2)

Students will convert units within measurement systems using standard and metric, given conversion factors.

(08.4.1)

Students will identify, describe, compare, and classify two- and three dimensional geometric figures - plane figures like polygons and circles; solid figures like prisms, pyramids, cones, spheres, and cylinders; lines, line segments, rays, angles, parallel and perpendicular lines.

(08.4.2)

Students will use geometric properties, the Pythagorean theorem, and the relationships of congruence, similarity, and symmetry.

(08.4.3)

Students will use formulas to solve problems involving perimeter and area of a square, rectangle, parallelogram, trapezoid and triangle, as well as the area and circumference of circles.

(08.4.4)

Students will solve problems given formulas for volume and surface area of rectangular prisms, cylinders, and cones.

(08.4.5)

Students will apply transformations to two- and three-dimensional geometric figures.

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

ITE 08.2.6 Construction - Career Information/Transition

The study of the careers and opportunities available in Construction Technology

- Identify employability skills
- Practice employability skills
- Explore current and future career paths and opportunities

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

ITE 08.3.1 Manufacturing - Systems

The study of the systems as they apply to the various levels of Manufacturing Technology

- Explain what it means to manufacture a quality product
- Recognize the four components of the systems approach in the manufacturing of a product
- Demonstrate the basic processes involved in custom fabrication and mass production

Links to Standards**Science**

(08.1.1)

Develop an understanding of systems, order, and organization.

ITE 08.3.2 Manufacturing - Characteristics,Impacts

The study of the characteristics, impacts and development of Manufacturing Technology

- Develop an awareness and address the effect manufacturing has on the environment
- Identify evolving manufacturing technologies
- Develop an appreciation for products and inventors
- Recognize historical contributions of men and women of different cultures in the advancement of manufacturing
- Identify and describe the differences between renewable and exhaustible resources

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.5.2)

Students will read and interpret tables, charts, and graphs to make comparisons and predictions.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

Science

(08.7.2)

Develop an understanding of relationships among populations, resources, and environments.

(08.7.4)

Develop an understanding of risks and benefits.

Social Studies/History

(08.1.5)

Describe growth and change in the United States from 1801-1861.

(08.1.9)

Describe key people, events, and ideas since World War II.

ITE 08.3.3 Manufacturing - Problem Solving/Decision Making**Links to Standards**

The study of the problem solving and decision making skills needed for Manufacturing Technology

- Employ a systematic model for problem-solving in materials processing and production
- Identify and describe different approaches to formal and informal problem-solving

Reading/Speaking/Listening

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.5.2)

Students will read and interpret tables, charts, and graphs to make comparisons and predictions.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

Science

(08.6.1)

Develop an understanding of technological design.

ITE 08.3.4 Manufacturing - Resources

The study of the resources used in Manufacturing Technology

- Demonstrate safe use of tools and machinery
- Identify characteristics of industrial materials and how they are processed
- Develop an awareness of the impacts manufacturing has on society and the environment
- Identify, select and use resources in the solution of a problem to produce a product

Links to Standards**Reading/Speaking/Listening**

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

Mathematics

(08.5.4)

Students will identify statistical methods and probability for making decisions.

Science

(08.7.3)

Develop an understanding of natural hazards.

(08.7.4)

Develop an understanding of risks and benefits.

ITE 08.3.5 Manufacturing - Integrated Skills

The study of the integration of skills from other curricular areas into Manufacturing Technology

- Demonstrate the ability to integrate basic skills into the manufacturing process
- Identify common units of measurement associated with manufacturing materials
- Use team work to accomplish a common goal in manufacturing

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.1.1)

Students will recognize natural numbers, whole numbers, integers, and rational numbers.

(08.1.2)

Students will determine equivalences among fractions, decimals, and percents.

(08.2.1)

Students will add, subtract, multiply, and divide decimals and proper, improper, and mixed fractions with uncommon and common denominators with and without the use of technology.

(08.2.2)

Students will identify the appropriate operation and do the correct calculations when solving word problems.

(08.2.3)

Students will solve problems involving whole numbers, integers, and rational numbers (fractions, decimals, ratios, proportions, and percents) with and without the use of technology.

(08.2.4)

Students will apply the order of operations to solve problems with and without the use of technology.

(08.2.5)

Students will apply strategies of estimation when solving problems with and without the use of technology.

(08.3.1)

Students will select measurement tools and measure quantities for temperature, time, money, distance, angles, area, perimeter, volume, capacity, and weight/mass in standard and metric units at the designated level of precision.

(08.3.2)

Students will convert units within measurement systems using standard and metric, given conversion factors.

(08.4.1)

Students will identify, describe, compare, and classify two- and three dimensional geometric figures - plane figures like polygons and circles; solid figures like prisms, pyramids, cones, spheres, and cylinders; lines, line segments, rays, angles, parallel and perpendicular lines.

(08.4.2)

Students will use geometric properties, the Pythagorean theorem, and the relationships of congruence, similarity, and symmetry.

(08.4.3)

Students will use formulas to solve problems involving perimeter and area of a square, rectangle, parallelogram, trapezoid and triangle, as well as the area and circumference of circles.

(08.4.4)

Students will solve problems given formulas for volume and surface area of rectangular prisms, cylinders, and cones.

(08.4.5)

Students will apply transformations to two- and three-dimensional geometric figures.

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

ITE 08.3.6 Manufacturing - Career Information/Transition

The study of careers and opportunities available in Manufacturing Technology

- Investigate educational opportunities and employment requirements related to manufacturing careers
- Investigate career opportunities related to manufacturing

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

Social Studies/History

(08.3.5)

Explain the structure and operation of the United States economy and the role of citizens as producers and consumers.

ITE 08.4.1 Transportation - Systems

The study of the systems as they apply to the various levels of Transportation Technology

- Identify characteristics of energy, power, and mechanics
- Identify and discuss land, marine, air, and space transportation systems

Links to Standards**Science**

(08.1.1)

Develop an understanding of systems, order, and organization.

ITE 08.4.2 Transportation - Characteristics, Impact

The study of the characteristics, impacts and development of Transportation Technology

- Identify and list characteristics of transportation
- List historical factors, current impacts, and predict possible future impacts of innovative transportation technologies

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.5.2)

Students will read and interpret tables, charts, and graphs to make comparisons and predictions.

Science

(08.7.5)

Develop an understanding of science and technology in society.

Social Studies/History

(08.1.5)

Describe growth and change in the United States from 1801-1861.

(08.1.9)

Describe key people, events, and ideas since World War II.

ITE 08.4.3 Transportation - Problem Solving/Decision Making**Links to Standards**

The study of the problem solving and decision making skills needed for Transportation Technology

- Recognize factors and opportunities in developing a solution to a transportation problem
- Apply a problem-solving approach to solve a problem
- Formulate decisions based on information and time available
- Identify individual task assignments in a group problem-solving situation

Reading/Speaking/Listening

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.5.1)

Students will collect, construct, and interpret data displays and compute mean, median, and mode.

(08.5.4)

Students will identify statistical methods and probability for making decisions.

Science

(08.6.1)

Develop an understanding of technological design.

ITE 08.4.4 Transportation - Resources

The study of the resources used in Transportation Technology

- Select and manipulate resources necessary in transportation
- Identify and evaluate inputs, processes, and outputs used based on form, function, and aesthetic needs

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

ITE 08.4.5 Transportation - Integrated Skills

The study of the integration of skills from other curricular areas into Transportation Technology

- Identify and list the basic skills, thinking skills, and personal qualities needed to produce a desired outcome or product

Links to Standards**Reading/Speaking/Listening**

(08.1.1)

Students will identify the main idea and supporting details in what they have read.

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

(08.1.5)

Students will identify and apply knowledge of the text structure and organizational elements to analyze nonfiction or informational text.

(08.2.4)

Students will demonstrate the use of multiple forms to write for different audiences and purposes.

(08.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

(08.3.1)

Students will participate in group discussions by asking questions and contributing information and ideas.

(08.3.2)

Students will use multiple presentation styles for specific audiences and purposes.

(08.4.1)

Students will identify information gained and complete tasks through listening.

Mathematics

(08.1.1)

Students will recognize natural numbers, whole numbers, integers, and rational numbers.

(08.1.2)

Students will determine equivalences among fractions, decimals, and percents.

(08.2.1)

Students will add, subtract, multiply, and divide decimals and proper, improper, and mixed fractions with uncommon and common denominators with and without the use of technology.

(08.2.2)

Students will identify the appropriate operation and do the correct calculations when solving word problems.

(08.2.3)

Students will solve problems involving whole numbers, integers, and rational numbers (fractions, decimals, ratios, proportions, and percents) with and without the use of technology.

(08.2.4)

Students will apply the order of operations to solve problems with and without the use of technology.

(08.2.5)

Students will apply strategies of estimation when solving problems with and without the use of technology.

(08.3.1)

Students will select measurement tools and measure quantities for temperature, time, money, distance, angles, area, perimeter, volume, capacity, and weight/mass in standard and metric units at the designated level of precision.

(08.3.2)

Students will convert units within measurement systems using standard and metric, given conversion factors.

(08.4.1)

Students will identify, describe, compare, and classify two- and three dimensional geometric figures - plane figures like polygons and circles; solid figures like prisms, pyramids, cones, spheres, and cylinders; lines, line segments, rays, angles, parallel and perpendicular lines.

(08.4.2)

Students will use geometric properties, the Pythagorean theorem, and the relationships of congruence, similarity, and symmetry.

(08.4.3)

Students will use formulas to solve problems involving perimeter and area of a square, rectangle, parallelogram, trapezoid and triangle, as well as the area and circumference of circles.

(08.4.4)

Students will solve problems given formulas for volume and surface area of rectangular prisms, cylinders, and cones.

(08.4.5)

Students will apply transformations to two- and three-dimensional geometric figures.

(08.4.6)

Students will use geometric terms and representations to describe the physical world.

(08.5.1)

Students will collect, construct, and interpret data displays and compute mean, median, and mode.

(08.6.1)

Students will demonstrate knowledge and use of the one- and two-dimensional coordinate systems.

ITE 08.4.6 Transportation - Career Information/Transition

The study of the careers and opportunities available in Transportation Technology

- Identify the process of exploring a career
- Describe a career path in an area of interest

Links to Standards

Reading/Speaking/Listening

(08.1.2)

Students will identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

Social Studies/History

(08.3.5)

Explain the structure and operation of the United States economy and the role of citizens as producers and consumers.

ITE 12.1.1 Communications - Systems

The study of the systems as they apply to the various levels of Communication Technology

- Design and evaluate an effective audio, visual, and/or audio-visual communication system
- Analyze the input, process, output, and feedback processes of a communication system
- Analyze the interaction of humans and machines

Links to Standards**Mathematics**

(12.1.2)

Students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents.

(12.2.1)

Students will solve theoretical and applied problems using numbers in equivalent forms, radicals, exponents, scientific notation, absolute values, fractions, decimals, and percents, ratios and proportions, order of operations, and properties of real numbers.

(12.2.2)

Students will justify solutions to mathematical problems.

(12.2.3)

Students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology.

Science

(12.1.1)

Develop an understanding of systems, order, and organization.

ITE 12.1.2 Communications - Characteristics,Impacts

The study of the characteristics, impacts and development of Communication Technology

- Compare and contrast the past, present, and future characteristics, impacts, and developments of the communication systems
- Apply electronic, graphic, light, optic, and acoustic modes to send, receive, and process information
- Integrate gender/cultural diversity into a communication system

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Science

(12.8.3)

Develop an understanding of the history of science.

Social Studies/History

(12.2.9)

Analyze and explain the effects of the Industrial Revolution.

ITE 12.1.3 Communications - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Communication Technology

- Develop and analyze the solution to a problem of information transfer

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.4.6)

Students will apply geometric properties to solve problems.

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

(12.5.3)

Students will apply theoretical probability to represent problems and make decisions.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.6.1)

Develop an understanding of technological design.

ITE 12.1.4 Communications - Resources

The study of the resources used in Communication Technology

- Compare, contrast, and safely utilize resources to inform, persuade, or entertain in the home, school, and community
- Develop and apply skills in electronic, graphic, light, optic and acoustic modes to send, receive, and process information

Links to Standards**Science**

(12.7.4)

Develop an understanding of environmental quality.

ITE 12.1.5 Communications - Integrated Skills

The study of the integration of skills from other curricular areas into Communication Technology

- Recognize knowledge and skills from other curricular area and apply them to enhance systems of communication

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.2.1)

Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

(12.2.2)

Students will write compositions with focus, related ideas, and supporting details.

(12.2.4)

Students will use multiple forms to write for different audiences and purposes.

(12.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing, and outlining while learning.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

(12.3.2)

Students will make oral presentations that demonstrate consideration of audience, purpose, and information.

Mathematics

(12.1.2)

Students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents.

(12.2.1)

Students will solve theoretical and applied problems using numbers in equivalent forms, radicals, exponents, scientific notation, absolute values, fractions, decimals, and percents, ratios and proportions, order of operations, and properties of real numbers.

(12.2.3)

Students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology.

(12.3.1)

Students will select and use measuring units, tools, and/or technology and explain the degree of accuracy and precision of measurements.

(12.3.2)

Students will convert between metric and standard units of measurement, given conversion factors.

- (12.4.1)
Students will calculate perimeter and area of two-dimensional shapes and surface area and volume of three-dimensional shapes.
- (12.4.2)
Students will create geometric models to describe the physical world.
- (12.4.3)
Students will evaluate characteristics and properties of two- and three-dimensional geometric shapes.
- (12.4.4)
Students will apply coordinate geometry to locate and describe objects algebraically.
- (12.4.5)
Students will apply right triangle trigonometry to find length and angle measures.
- (12.4.6)
Students will apply geometric properties to solve problems.
- (12.4.7)
Students will apply deductive reasoning to arrive at a conclusion.
- (12.6.2)
Students will solve problems involving equations and inequalities.

ITE 12.1.6 Communications - Career Information/Transition

The study of the careers and opportunities available in Communication Technology

- Choose and plan an experience in related fields of individual interest
- Assess and implement employability skills

Links to Standards

Reading/Speaking/Listening

- (12.1.2)
Students will locate, evaluate, and use primary and secondary resources for research.

ITE 12.2.1 Construction - Systems

The study of the systems as they apply to the various levels of Construction Technology

- Differentiate between and apply the methods and techniques of construction
- Differentiate between the types of construction
- Differentiate between the dependence and independence of construction sub-systems

Links to Standards

Science

- (12.1.1)
Develop an understanding of systems, order, and organization.

ITE 12.2.2 Construction - Characteristics, Impacts

The study of the characteristics, impacts and development of Construction Technology

- Determine and describe how society and the environment have been affected or influenced by the construction industry
- Predict how the construction industry is likely to be affected by technology
- Identify the effects on the construction industry of workforce diversity
- Describe the relationship among the various types of construction: light, commercial, industrial, and civil

Links to Standards

Reading/Speaking/Listening

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

Science

(12.8.3)

Develop an understanding of the history of science.

ITE 12.2.3 Construction - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Construction Technology

- Apply a problem-solving approach to solve an advanced problem and analyze the solution
- Apply decision-making skills to select appropriate resources

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.4.6)

Students will apply geometric properties to solve problems.

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

(12.5.3)

Students will apply theoretical probability to represent problems and make decisions.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.6.1)

Develop an understanding of technological design.

ITE 12.2.4 Construction - Resources

The study of the resources used in Construction Technology

- Safely operate tools and equipment appropriate for the construction industry
- Develop and refine skills related to the construction industry
- Develop craftsmanship in the construction of a product
- Select and use fasteners, adhesives, and appropriate construction materials
- Utilize resources in the construction process, adhering to applicable codes

Links to Standards

Science

Develop an understanding of environmental quality. (12.7.4)

ITE 12.2.5 Construction - Integrated Skills

The study of the integration of skills from other curricular areas into Construction Technology

- Utilize and convert measurements accurately
- Apply blueprint reading skills to appropriate situations
- Develop and comprehend written and oral directions
- Refine and utilize basic skills related to the construction industry

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.2.1)

Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

(12.2.2)

Students will write compositions with focus, related ideas, and supporting details.

(12.2.4)

Students will use multiple forms to write for different audiences and purposes.

(12.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing, and outlining while learning.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

(12.3.2)

Students will make oral presentations that demonstrate consideration of audience, purpose, and information.

Mathematics

(12.1.2)

Students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents.

(12.2.1)

Students will solve theoretical and applied problems using numbers in equivalent forms, radicals, exponents, scientific notation, absolute values, fractions, decimals, and percents, ratios and proportions, order of operations, and properties of real numbers.

(12.2.3)

Students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology.

(12.3.1)

Students will select and use measuring units, tools, and/or technology and explain the degree of accuracy and precision of measurements.

(12.3.2)

Students will convert between metric and standard units of measurement, given conversion factors.

(12.4.1)

Students will calculate perimeter and area of two-dimensional shapes and surface area and volume of three-dimensional shapes.

(12.4.2)

Students will create geometric models to describe the physical world.

(12.4.3)

Students will evaluate characteristics and properties of two- and three-dimensional geometric shapes.

(12.4.4)

Students will apply coordinate geometry to locate and describe objects algebraically.

(12.4.5)

Students will apply right triangle trigonometry to find length and angle measures.

(12.4.6)

Students will apply geometric properties to solve problems.

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.1.3)

Develop an understanding of change, constancy, and measurement.

ITE 12.2.6 Construction - Career Information/Transition

The study of the careers and opportunities available in Construction Technology

- Model appropriate employability skills
- Examine career paths through work experience and/or educational opportunities in construction
- Explore current and future employment opportunities

Links to Standards

Reading/Speaking/Listening

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

ITE 12.3.1 Manufacturing - Systems

The study of the systems as they apply to the various levels of Manufacturing Technology

- Implement the four components of a system in the manufacturing of a product
- Apply the advanced systematic processes involved in custom fabrication and mass production
- In a prescribed setting, perform advanced operation representative of those utilized in manufacturing

Links to Standards**Science**

(12.1.1)

Develop an understanding of systems, order, and organization.

ITE 12.3.2 Manufacturing - Characteristics,Impacts

The study of the characteristics, impacts and development of Manufacturing Technology

- Develop an awareness and address the effect manufacturing has on the environment
- Identify and apply evolving manufacturing technologies
- Research and analyze the economics of a competitive market
- Examine historical contributions of men and women of different cultures in the advancement of manufacturing

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

Science

(12.7.4)

Develop an understanding of environmental quality.

(12.8.3)

Develop an understanding of the history of science.

Social Studies/History

(12.1.5)

Summarize causes and effects of the Industrial Revolution.

(12.2.9)

Analyze and explain the effects of the Industrial Revolution.

(12.2.10)

Analyze major 20th century historical events.

(12.3.11)

Analyze characteristics of the United States free market economy.

ITE 12.3.3 Manufacturing - Problem Solving/Decision Making**Links to Standards**

The study of the problem solving and decision making skills needed for Manufacturing Technology

- Utilize team work and individual ingenuity to solve technical problems in manufacturing
- Suggest and analyze ideas that could be implemented to resolve problems in manufacturing
- Employ higher-order thinking skills for solving manufacturing problems

Reading/Speaking/Listening

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

(12.5.3)

Students will apply theoretical probability to represent problems and make decisions.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.6.1)

Develop an understanding of technological design.

ITE 12.3.4 Manufacturing - Resources

The study of the resources used in Manufacturing Technology

- Apply tools, materials, machines, processes, and technical concepts safely and efficiently to a prescribed situation
- Evaluate and explain differences between characteristics of industrial materials
- Demonstrate separating, forming, and combining in manufacturing a product
- Meet or exceed product and processing specifications (i.e. measurements)
- Demonstrate skills necessary to adapt to an ever-changing global environment
- Develop and implement a plan to use manufacturing resources in the solution of a problem
- Demonstrate ingenuity and creativity in the use of manufacturing resources

Links to Standards**Mathematics**

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

Science

(12.3.2)

Develop an understanding of the structure and properties of matter.

(12.3.3)

Develop an understanding of chemical reactions.

ITE 12.3.5 Manufacturing - Integrated Skills

The study of the integration of skills from other curricular areas into Manufacturing Technology

- Implement cross-curricular experiences in order to reach a common goal
- Interpret data to manufacture a product
- Evaluate and explain the importance of specifications in the production of a product
- Demonstrate the ability to integrate basic skills into the manufacturing process
- Demonstrate the use of common unity of measurement associated with manufacturing materials
- Demonstrate the ability to work as a team member on the solution of manufacturing problems
- Demonstrate the ability to comprehend written and oral directions in manufacturing a product

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.2.1)

Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

(12.2.2)

Students will write compositions with focus, related ideas, and supporting details.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

(12.3.2)

Students will make oral presentations that demonstrate consideration of audience, purpose, and information.

Mathematics

(12.1.2)

Students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents.

(12.2.1)

Students will solve theoretical and applied problems using numbers in equivalent forms, radicals, exponents, scientific notation, absolute values, fractions, decimals, and percents, ratios and proportions, order of operations, and properties of real numbers.

(12.2.3)

Students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology.

(12.3.1)

Students will select and use measuring units, tools, and/or technology and explain the degree of accuracy and precision of measurements.

(12.3.2)

Students will convert between metric and standard units of measurement, given conversion factors.

(12.4.1)

Students will calculate perimeter and area of two-dimensional shapes and surface area and volume of three-dimensional shapes.

(12.4.2)

Students will create geometric models to describe the physical world.

	(12.4.3)
Students will evaluate characteristics and properties of two- and three-dimensional geometric shapes.	
	(12.4.4)
Students will apply coordinate geometry to locate and describe objects algebraically.	
	(12.4.5)
Students will apply right triangle trigonometry to find length and angle measures.	
	(12.4.6)
Students will apply geometric properties to solve problems.	
	(12.4.7)
Students will apply deductive reasoning to arrive at a conclusion.	
	(12.6.2)
Students will solve problems involving equations and inequalities.	
<u>Science</u>	
	(12.7.3)
Develop an understanding of natural resources.	

ITE 12.3.6 Manufacturing - Career Information/Transition

The study of careers and opportunities available in Manufacturing Technology

- Examine career paths through work experience and/or educational opportunities in manufacturing
- Demonstrate employability skills required to make a transition from school to a manufacturing career

Links to Standards

Reading/Speaking/Listening

	(12.1.2)
Students will locate, evaluate, and use primary and secondary resources for research.	

ITE 12.4.1 Transportation - Systems

The study of the systems as they apply to the various levels of Transportation Technology

- Examine and illustrate land, marine, air and space transportation systems
- Apply and refine the skills and knowledge gained in the sub-systems of propulsion, suspension, guidance, control, support, and structure

Links to Standards

Science

	(12.1.1)
Develop an understanding of systems, order, and organization.	

ITE 12.4.2 Transportation - Characteristics,Impact

The study of the characteristics, impacts and development of Transportation Technology

- Identify and evaluate the characteristics of transportation
- Research and present historical factors, current impacts, and predict the possible future impacts of innovative transportation technologies
- Predict and support with research the impact a shift in the availability of a selected input would have on a transportation system

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

Science

(12.8.3)

Develop an understanding of the history of science.

ITE 12.4.3 Transportation - Problem Solving/Decision Making

The study of the problem solving and decision making skills needed for Transportation Technology

- Research, apply, evaluate factors, and opportunities in developing a solution to a transportation problem
- Apply an appropriate method of problem-solving
- Assign and implement appropriate tasks in a problem-solving activity

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

Mathematics

(12.4.6)

Students will apply geometric properties to solve problems.

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.5.1)

Students will select a sampling technique to gather data, analyze the resulting data and make inferences.

(12.5.3)

Students will apply theoretical probability to represent problems and make decisions.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.6.1)

Develop an understanding of technological design.

ITE 12.4.4 Transportation - Resources

The study of the resources used in Transportation Technology

- Identify, apply, and evaluate resources in transportation
- Analyze various inputs, processes, and outputs to formulate decisions based on form, function, and aesthetic needs

Links to Standards**Science**

(12.1.4)

Develop an understanding of form and function.

ITE 12.4.5 Transportation - Integrated Skills

The study of the integration of skills from other curricular areas into Transportation Technology

- Identify, list, and refine the basic skills and qualities needed to produce a desired outcome or product
- Apply the knowledge, skills, and resources of other disciplines to a transportation activity

Links to Standards**Reading/Speaking/Listening**

(12.1.1)

Students will identify the main idea and supporting details in what they have read.

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.

(12.1.6)

Students will identify and apply knowledge of the text structure and organizational elements to analyze non-fiction or informational text.

(12.2.1)

Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

(12.2.2)

Students will write compositions with focus, related ideas, and supporting details.

(12.2.4)

Students will use multiple forms to write for different audiences and purposes.

(12.2.5)

Students will demonstrate the ability to use self-generated questions, note taking, summarizing, and outlining while learning.

(12.3.1)

Students will participate in student directed discussions by eliciting questions and responses.

(12.3.2)

Students will make oral presentations that demonstrate consideration of audience, purpose, and information.

Mathematics

(12.1.2)

Students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents.

(12.2.1)

Students will solve theoretical and applied problems using numbers in equivalent forms, radicals, exponents, scientific notation, absolute values, fractions, decimals, and percents, ratios and proportions, order of operations, and properties of real numbers.

(12.2.3)

Students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology.

(12.3.1)

Students will select and use measuring units, tools, and/or technology and explain the degree of accuracy and precision of measurements.

(12.3.2)

Students will convert between metric and standard units of measurement, given conversion factors.

(12.4.1)

Students will calculate perimeter and area of two-dimensional shapes and surface area and volume of three-dimensional shapes.

(12.4.2)

Students will create geometric models to describe the physical world.

(12.4.3)

Students will evaluate characteristics and properties of two- and three-dimensional geometric shapes.

(12.4.4)

Students will apply coordinate geometry to locate and describe objects algebraically.

(12.4.5)

Students will apply right triangle trigonometry to find length and angle measures.

(12.4.6)

Students will apply geometric properties to solve problems.

(12.4.7)

Students will apply deductive reasoning to arrive at a conclusion.

(12.6.2)

Students will solve problems involving equations and inequalities.

Science

(12.7.3)

Develop an understanding of natural resources.

(12.7.4)

Develop an understanding of environmental quality.

ITE 12.4.6 Transportation - Career Information/Transition

The study of the careers and opportunities available in Transportation Technology

- Plan, apply, and evaluate the process of exploring a career
- Evaluate a career choice based on skill and interest of learner and job characteristics
- Examine and experience various means of making the transition from school to work

Links to Standards

Reading/Speaking/Listening

(12.1.2)

Students will locate, evaluate, and use primary and secondary resources for research.